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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,714	06/25/2001	Johan Smets	CM2380	8782

27752 7590 08/14/2002

THE PROCTER & GAMBLE COMPANY  
INTELLECTUAL PROPERTY DIVISION  
WINTON HILL TECHNICAL CENTER - BOX 161  
6110 CENTER HILL AVENUE  
CINCINNATI, OH 45224

EXAMINER

KUMAR, PREETI

ART UNIT	PAPER NUMBER
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1751

8

DATE MAILED: 08/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/888,714

Applicant(s)

SMETS ET AL.

Examiner

Preeti Kumar

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 May 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 7-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. Claims 1-4 and 7-12 are pending.
2. The rejection of claims 1 and 7-11 rejected under 35 U.S.C 112 are withdrawn in light of applicant's amendment dated May 30, 2002, paper # 7.
3. The rejection of claims 11 and 12 rejected under 35 U.S.C. 101 are withdrawn in light of applicant's amendment.
4. The rejection of claims 1-12 rejected under 35 U.S.C. 103(a) as being obvious over von der Osten et al. (US 6,015,783) is maintained for the reasons of record, cited in the previous office action and further explained below.

### ***Response to Arguments***

5. Applicant's arguments filed on May 30, 2002 in paper # 7, have been fully considered but they are not persuasive because contrary to Applicant's arguments, von der Osten et al. do specifically suggest a detergent composition comprising a cyclodextrin glucanotransferase enzyme, a detergent ingredient and a starch binding domain derived from the specific sources set forth in amended claim 1. The examiners draws Applicant's attention to column 3, lines 35-50, where von der Osten et al. suggest the use of EC 3.2.1.1, a catalytically active amino acid sequence of an enzyme useful in relation to the cleaning of fabric or textile in washing processes. See col.3, ln.40-45. The teachings of von der Osten et al. do suggest a detergent composition comprising a glucoamylase of *Aspergillus niger*, since it is well with in the knowledge of one of ordinary skill in the art that the enzyme classification 3.2.1.1 includes

Art Unit: 1751

ACID ALPHA-AMYLASE (EC 3.2.1.1) (1,4-ALPHA-D-GLUCAN GLUCANOHYDROLASE). [*Aspergillus niger*]

(AMYA)ALPHA-AMYLASE A PRECURSOR (EC 3.2.1.1) (1,4-ALPHA-D-GLUCAN GLUCANOHYDROLASE A). [*Aspergillus awamori*]

(AMYB)ALPHA-AMYLASE B PRECURSOR (EC 3.2.1.1) (1,4-ALPHA-D-GLUCAN GLUCANOHYDROLASE B). [*Aspergillus awamori*]

Please see <http://mbu.iisc.ernet.in/~pbgrp/date/1ciu.html>

Hence, the rejection of claims 1-12 rejected under 35 U.S.C. 103(a) as being obvious over von der Osten et al. (US 6,015,783) is maintained for the reasons of record.

### ***New Grounds of Rejection***

6. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danielsen et al. (US 6,410,291).

Danielsen et al. teach a detergent composition formulated as a hand or machine laundry detergent composition including a laundry additive composition suitable for pre-treatment of stained fabrics and a rinse added fabric softener composition, or be formulated as a detergent composition for use in general household hard surface cleaning operations, or be formulated for hand or machine dishwashing operations. In a specific aspect, the invention provides a detergent additive comprising a haloperoxidase. Danielsen et al. teach that the detergent additive as well as the detergent composition may comprise one or more other enzymes such as a protease, a lipase, a cutinase, an amylase, a carbohydrase, a cellulase, a pectinase, a mannanase, an arabinase, a galactanase, a xylanase, an oxidase, e.g., a laccase, and/or a peroxidase. In general the properties of the chosen enzyme(s) should be compatible with the selected detergent, (i.e. pH-optimum, compatibility with other enzymatic and

Art Unit: 1751

non-enzymatic ingredients, etc.), and the enzyme(s) should be present in effective amounts. Suitable proteases include those of animal, vegetable or microbial origin. Microbial origin is preferred. Chemically modified or protein engineered mutants are included. The protease may be a serine protease or a metallo protease, preferably an alkaline microbial protease or a trypsin-like protease. Examples of alkaline proteases are subtilisins, especially those derived from *Bacillus*, e.g., subtilisin Novo, subtilisin Carlsberg, subtilisin 309, subtilisin 147 and subtilisin 168. Examples of trypsin-like proteases are trypsin (e.g. of porcine or bovine origin) and the *Fusarium* protease. The composition may comprise a polypeptide of the invention as the major enzymatic component. Alternatively, Danielsen et al. suggest that the composition may comprise multiple enzymatic activities, such as an aminopeptidase, amylase, carbohydrase, carboxypeptidase, catalase, cellulase, cyclodextrin glycosyltransferase, alpha-galactosidase, beta-galactosidase, glucoamylase, alpha-glucosidase, beta-glucosidase, haloperoxidase, or proteolytic enzyme. The additional enzyme(s) may be producible by means of a microorganism belonging to the genus *Aspergillus*, preferably *Aspergillus aculeatus*, *Aspergillus awamori*, *Aspergillus niger*, or *Aspergillus oryzae*. See col. 20, ln.1-60.

Specifically regarding claim 7, Danielsen et al. teach that the detergent will usually contain from about 0.2% to about 40% of a non-ionic surfactant such as alcohol ethoxylate, nonylphenol ethoxylate, alkylpolyglycoside, alkyl dimethylamineoxide, ethoxylated fatty acid monoethanolamide, fatty acid monoethanolamide, polyhydroxy

alkyl fatty acid amide, or N-acyl N-alkyl derivatives of glucosamine ("glucamides"). See col.22, ln.60-65.

Specifically regarding claim 8, Danielsen et al. teach that the detergent may contain a bleaching system, which may comprise a H<sub>2</sub>O<sub>2</sub> source such as perborate or percarbonate which may be combined with a peracid- forming bleach activator such as tetraacetythylenediamine or nonanoyloxybenzenesulfonate. Alternatively, the bleaching system may comprise peroxyacids of e.g. the amide, imide, or sulfone type. See col.23, ln.14-20.

Danielsen et al. do not specifically teach a detergent composition having the specific ratios and proportions as recited by the instant claims.

However, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to formulate a detergent composition comprising a cyclodextrin glucanotransferase enzyme, a nonionic surfactant, a protease, a bleaching agent and a glucoamylase derived from *Aspergillus niger* in the specific proportions as recited by the instant claims, with a reasonable expectation of success, because Danielsen et al. suggest a detergent composition comprising a cyclodextrin glucanotransferase enzyme, a nonionic surfactant, a protease, a bleaching agent and a glucoamylase derived from *Aspergillus niger* and further, it would have been obvious, to one of ordinary skill in the art, to modify the claimed ratios as suggested in the prior art.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 1751

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

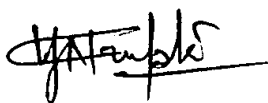
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Preeti Kumar whose telephone number is 703-305-0178. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 703-308-4708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

PK  
August 12, 2002



**YOGENDRA N. GUPTA**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 1700**

Preeti Kumar  
Examiner  
Art Unit 1751

Application/Control Number: 09/888,714  
Art Unit: 1751

Page 7